

**1    ABSTRACT OF THE DISCLOSURE**

2            A rapid cycle pressure swing adsorption oxygen concentration method  
3    uses a mechanical valve that has at least one cam-actuated flow control valve to  
4    switch flow of fluid, such as compressed air coming into a sieve tank that is fitted  
5    with molecular sieve materials. The cam-actuated flow control valve is  
6    repeatedly actuated by the rotating cams to become open or closed to complete a  
7    cycle that precisely controls the flow direction, pressure conditions and  
8    pressurized timing in the sieve tank whereby performance and efficiency of  
9    producing rapidly oxygen is high.